Multicultural Awareness and Technology in Higher Education: Global Perspectives

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Chapter 10
Learning Cultures and Multiculturalism: Authentic E-Learning Designs

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ABSTRACT

In the rapidly globalizing 21st century knowledge society, multicultural understanding plays a major role. However, what do we mean by “culture” in the educational context, what aspects have or should have an impact on our learning environments, and might some of these assumptions direct the development of our learning environments in an unintended and possibly undesirable way? New learning models that differ from traditional learning approaches might cause a type of a “learning culture shock” for some learners. What are the best ways to avoid and overcome cultural clashes in online learning? This chapter discusses the experiences of two cases from multicultural and multidisciplinary online programs for teacher education and professional development. Both of the programs are based on the principles of authentic e-learning framework described by Herrington, Reeves, and Oliver (2010). The aim of the study was to find out how learners with different cultural backgrounds experience the authentic e-learning process, as well as to find out what impact the authentic e-learning model has on the development of the learning culture.

INTRODUCTION

During recent years, globalization and rapid technological development have brought about changes and new challenges for higher education throughout the world. Different, remote-access online learning approaches, such as massive open online courses (MOOCs), have extended learning opportunities for learners from different parts of the world and created new types of multicultural learning contexts. While these new learning encounters where learners from different cultures...
come together in virtual spaces offer new, exciting learning opportunities for many, they also bring new challenges for educators and educational designers. Increasingly often, learning spaces are virtual and the groups of learners are increasingly diverse. This raises questions of how to take cultural differences into account in the design and delivery of e-learning. At the same time, graduate outcomes such as critical thinking, collaboration skills, appreciation of diversity and intercultural communication skills, are in demand.

Multiculturalism and the impact of cultural aspects in learning are often associated with different ethnic backgrounds, religions and languages. While all such aspects are important to consider, it can also be argued that there are diverse learning cultures that affect the way students and teachers behave in an educational context. These learning cultures can be formed by factors such as academic tradition, field of study, and preferred teaching methods. Very often, these cultures - the traditional teaching and learning practices of higher education - are replicated in online learning. Learning management systems, such as Moodle, Blackboard or Optima, are used for information transfer through lectures or readings, followed by assessment based on the reproduction of this information (Laurillard & Masterman, 2009). Despite this, even the transition from classroom education to online learning can be seen as a major cultural shift (e.g., Develotte, 2009).

How can pedagogically meaningful multicultural learning spaces and processes, that meet 21st century needs, be created? Researchers have earlier examined, for example, issues of culture in online education (Goodfellow & Lamy, 2009) and different international pedagogies (Hellsten & Reid, 2008). This study examines two cases of multicultural online learning that are based on authentic e-learning as a pedagogical framework. Authentic e-learning has been found to be an effective paradigm, for example, in supporting advanced knowledge acquisition (Herrington & Oliver, 2000), collaboration and development of a learning community (Oliver, Herrington, Herrington & Reeves, 2007); self-direction and general working life skills (Teräs & Leikomaa, 2011); networking and connecting between educational institutions and working life (Leppisaari, Maunula, Herrington & Hohenthal, 2011), as well as reflective practice (Teräs & Herrington, forthcoming). Deriving from situated learning and constructivist approaches, authentic e-learning offers a strong association with real-life professional practices and ways of thinking, which makes it a more useful approach when skills such as creative and critical thinking, problem solving and collaboration are in demand. (Herrington & Oliver, 2000; Herrington, 2005; Herrington, Reeves & Oliver, 2010).

Authentic e-learning differs from the traditional presentation-driven educational approaches in many ways, and it may create a feeling of unfamiliarity and uncertainty - a “learning culture shock” - for people with very different learning cultural background. In this chapter, factors that affect the implementation of authentic multicultural e-learning will be addressed. The chapter introduces two cases of authentic e-learning in a multicultural context and examines the effects of the multicultural aspect on their success. The research question represents two sides of the coin:

1. How did the learners from various cultural backgrounds experience the authentic e-learning process;
2. What impact did the authentic e-learning model have on the learning culture in the two cases?

LEARNING CULTURE AND CULTURAL IMPACT

In this chapter, we examine aspects that may affect the learning culture, and introduce examples of cultural impact that arise from the data of the two cases. We are interested in how learners with different cultural backgrounds experience
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the authentic e-learning process, as well as the impact of the authentic e-learning model on the development of the learning culture.

Culture and Learning

One should be careful when referring to the concept of “culture” as it is not easy to define. Commonly, when talking about culture, people are referring to ethnic groups or nationalities. Many researchers have examined cultural differences in learning, often using Hofstede’s model of cultural dimensions – power distance, uncertainty avoidance, individualism vs. collectivism, masculinity vs. femininity and long vs. short term orientation – as the framework (see Hofstede, 2001). However, it is easy to fall into the pit of stereotyping, as there are naturally noticeable differences between learners from the same cultural background, and nation states very seldom host a uniform culture.

In this context, learning culture is understood generally as an organisation or more broadly as a community’s concept of learning and the related operational practices and underpinning practices. Learning is directed by a community’s learning culture. Learning culture refers to operational practices that are characteristic to a learning community which are formed by learning, community, community members and environmental practices, perceptions and beliefs and their interpretation. Learning culture is defined as a set of shared beliefs, values and attitudes favourable to learning. (e.g., Innovative Workplaces, OECD http://www.oecd-ilibrary.org/education/innovative-workplaces_9789264095687-en)

The beliefs and practices of a community are absorbed through social interaction (e.g., Moore, 2004). Learning communities are a part of society that directs learning in accordance with objectives defined for education and social tasks given to graduates. The learning culture concept in practice is applied in multiple and diverse contexts and with various content; often learning cultures are broadly divided into two: Western – Eastern learning cultures. This inevitably leads one to think the phenomenon is over-simplified; what about Others? We also talk of teaching and learning clashes between different subject areas or different cultures; for example, collective learning, a ‘doing together’ culture may clash with a culture that stresses competition. Examples of these differences can be found in previous studies; for example, Boland, Sugahara, Opdecam and Everaert (2011) compared the learning style preferences of Australian, Japanese and Belgian students and found that the Japanese students had a clear preference for learning by watching, whereas the Australians were keen on learning by doing.

Given the complexity of the concept of “culture” or “learning culture,” how should – or could - cultural considerations be addressed in designing online learning? Researchers have different approaches to what culturally aware learning design is like. There are at least two major ways of looking at the question: some researchers emphasize the need of catering for different learning styles, whereas others find it more important to find ways of promoting cultural awareness of the learners in and through the multicultural learning environment. For example, Morse (2003) sees that increasing awareness of cultural differences has very practical implications for the future of online learning in the form of market segmentation. Raybourn (2012) on the other hand suggests that cultural aspects should be taken into consideration when designing online learning environments so that they would better enable co-creation of narratives and support intercultural understanding between users. Hewling (2005) emphasizes that the collaborative nature of online learning requires that attention is paid to intercultural collaboration and facilitating the communication of culturally diverse learners.

On the other hand, “culture” is more than ethnicity or nationality. Hewling (2005) believes that focusing on ideas of culture associated with ethnicity or nationality is not very beneficial when examining intercultural activity in online learning.
as the individual learners bring such a complex cocktail of cultural influences and determinants into the learning context. Other researchers have made similar remarks. Joy and Kolb (2009) found out in their study that the scientific background had a greater impact on learning styles than culture. Their findings are in accordance with the research of Lindblom-Ylänne, Trigwell, Nevgi and Ashwin (2006), who have pointed out a correlation between teacher’s discipline and her or his teaching methods and approach to teaching and learning. They found evidence that teachers of physical sciences, engineering and medicine tend to favour more teacher-centred approaches whereas teachers of social sciences and humanities apply more student-focused methods.

Academic traditions and learning culture also seem to vary in different countries. In these cases it can be hard to determine whether the different practices are due to the different culture in an ethnic / national sense, or whether the practices have historical background that derive from other variables. For example Syynimaa, Isomäki, Korhonen and Niemi (2010) report of difficulties in a Finnish-Russian collaborative online program that emerged from the students from the two countries being used to different learning methods, different roles of students and teachers, and different type of goal-setting for studies. Of course, academic traditions in different parts of a given country, or even between different institutions within a country may vary. They also evolve over time, which creates another level of cultural difference between students of different age groups.

Not all researchers see culture merely as something that is brought into the online learning context from outside. Rather, culture is created inside the learning context. We can understand the culture as an ongoing process of identity-construction through interaction (Goodfellow & Lamy, 2009). Contemporary learning theorists focus increasingly on the social nature of the meaning making process. As we engage in communities of discourse and practice, our knowledge and beliefs are influenced by those communities. So is our identity formation, which is also a major outcome of learning (Jonassen & Land, 2012). Schein (1992) points out that “the most useful way to think about culture is to view it as the accumulated, shared learning of a given group, covering behavioural, emotional and cognitive elements of the group members’ total psychological functioning” (Schein, 1992, p. 10). In other words, the group starts creating its own culture from the moment its members start working together. Also Hewling (2005) sees culture as “doing” and online classroom as an evolving site of cultural creation. The learning cultures of tomorrow’s learners are ever-expanding (Goodfellow & Lamy, 2009).

**Authentic E-Learning and Creating a New Learning Culture**

Similarly to the concept of culture, the concept of authenticity can also be defined in various different ways. In this chapter, authentic learning refers to the pedagogical conditions in online educational contexts—based on realistic settings and contexts—that provide opportunities for students to collaboratively undertake challenging and realistic tasks, resulting in meaningful products and significant learning. Rooted in situated learning, the education philosophical underpinnings of authentic learning are significantly different from teaching models based on content transmission. This presentation-driven way is very widely used in higher education, and there are undoubtedly countless students who are therefore used to this type of learning culture, either due to the academic tradition or discipline. Should educators thus apply online learning designs and methods that are familiar to these students? Trigwell, Prosser and Ginn (2005) would not recommend this— they argue that certain teaching strategies indeed are “better” than others in what type of learning they produce. A conceptual change driven, student-centred teaching strategy leads to deeper learning than one that is based on knowledge transmission (Trigwell
et al., 2005). They are not the only researchers who believe that traditional, presentation-driven way of teaching where information is delivered and tested is becoming less and less relevant: Solomon and Schrum (2007) also argue that it prepares students for jobs that require following directions and rote skills, which were very useful in the industrial era but not much so in the 21st century working environment.

Even though technological development has created rich affordances for a much more student driven and social ways of learning, the aforementioned content delivery driven approaches have been widely employed also in e-Learning. As Laurillard and Masterman (2009) point out, only a small proportion of the investments in ICT have been targeted at changing practices. Instead, E-books, interactive whiteboards and notebooks are used as electronic equivalents to traditional educational methods. Instead of learning with technology - taking full advantage of the nature and potential of emerging technologies as cognitive tools - what typically happens is learning from technology (Herrington & Parker, 2013). This exemplifies how a learning culture can be almost automatically transmitted into a new environment.

As illustrated in the previous chapter, the impact of culture on learning is a complex phenomenon and to take all possible variants into account in online learning design would be an overwhelming task. Moreover, it can be concluded that there are existing, long-rooted learning cultures that are no longer entirely relevant for the needs of the society. Therefore, the most beneficial way of designing multicultural online learning would probably be one that supports the shared creation of a new, 21st century learning culture and promotes cultural understanding and appreciation of diversity among the group of learners.

Authentic e-learning as described by Herrington, Reeves and Oliver (2010) provides a framework for online learning where a new, student-centred and active learning culture can be developed. Design guidelines provide a framework for educators to create such authentic e-learning environment, specifically:

- Provide authentic contexts that reflect the way the knowledge will be used in real life.
- Provide authentic tasks and activities.
- Provide access to expert performances and the modeling of processes.
- Provide multiple roles and perspectives.
- Support collaborative construction of knowledge.
- Promote reflection to enable abstractions to be formed.
- Promote articulation to enable tacit knowledge to be made explicit.
- Provide coaching and scaffolding by the teacher at critical times.
- Provide for authentic assessment of learning within the tasks (Herrington et al., 2010 p. 18).

The emphasis on the collaborative completion of realistic artifacts, similar to those that people would undertake in real-world professional situations, means that a shared culture of both the context and the product must be developed by students as they engage with the task. The creation of genuine and useful products that can be publicly shared online or within the course group, encourages students to create “polished products” with pride and a great deal of effort—and much more so than tests, essays or assignments that are only seen by the teacher as they are assessed.

**THE CASES AND THE STUDY**

Previous research at Tampere University of Applied Sciences has yielded encouraging results and promising guidelines for an authentic learning based model of teacher training that supports teaching faculty in adopting a new professional
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role and identity, as well as in developing skills in innovative use of education technology (see e.g., Teräs & Myllylä, 2011; Myllylä, Mäkelä & Torp, 2009). Similar results were compiled also in International Virtual benchmarking project (IVBM) coordinated by Finnish Online University of Applied Sciences, in which teachers from five countries were developing authentic e-learning together using the nine elements of authentic learning as the peer evaluation criteria for development of e-learning in higher education (Leppisaari, Herrington, Vainio & Im, 2011; Leppisaari, Vainio, Herrington & Im, 2011). In turn, IVBM project’s results were used in the ALP course design and implementation (see also Leppisaari, Vainio, Maunula & Hohenthal, 2012).

Introducing the Two Cases

Case 1 is a fully online postgraduate certificate program “21st Century Educators” (21stCE), developed at Tampere University of Applied Sciences. The aim of the program is to support the professional growth of teaching faculty who lack pedagogical background. The international pilot of the program was implemented at Higher Colleges of Technology in the United Arab Emirates during September 2011 – February 2013. The program is based on principles of authentic e-learning (Herrington, Reeves & Oliver, 2010) and it utilizes a wide range of social technologies. The program is designed to be taken in the authentic context of one’s own teaching work, using the teacher’s own classroom as an integral part of the learning environment and introducing authentic development projects that have a direct and immediate impact on the classroom work. The participating faculty members were both men and women, all expatriates, representing various nationalities from all over the globe, including Middle East, Europe, Asia, Australia and the US. Moreover, they were specialists of different subject matters. The program consists of three modules of 10 European credits, each taking on one semester. Thirty-two faculty members completed at least one of the modules and 23 were awarded the full certificate.

Case 2 is an Authentic e-Learning Principles course (ALP) implemented at Centria University of Applied Sciences. Centria is the leader organisation of KOR-EU KE-LeGE, Leaders for Global Education project. This project between European Union (EU) and the Korean Ministry of Education, Science and Technology aims to promote competencies of global education and intercultural sensitivity for young education leaders in Korea and EU countries. The targets are undergraduate students who will become secondary education teachers. The main framework of KE-LeGE comes from the framework of competencies four 21st century skills: ways of thinking, ways of working, tools of working, and living in the world (e.g., Cisco, 2010). The KE-LeGE exchange program creates Korean – European cooperation for learning the 21st century teacher skills. The Authentic Learning Principles course was produced and implemented within the KE-LeGE curriculum context in fall 2011 and 2012. In these pilots that are examined here as a whole, the aim was to design instructional approaches that support work-life competences of today. The ALP course introduces the nine elements of authentic learning (Herrington & Oliver, 2000; Herrington et al., 2010) and students engage these elements in online education teaching content production and online guidance provision. The courses clearly formed a multicultural learning environment, as in Fall 2011, thirteen students participated, mainly from South Korea, Lithuania, and Pakistan. The course was also multidisciplinary, with students majoring in education and management studies. In the first pilot (2011), there were two teachers who shared the tutoring resource and co-taught. The main focus in the pilot of 2012 was the multicultural learning process between Korean KE-LeGE student team and Finnish teacher. This authentic learning process was supported...
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We are especially interested in the experience of the learners: how they experience the authentic e-learning approach and being a part of a multicultural online learning group. We are also interested in the formation of the internal learning culture within the multicultural online learning context. On the other hand, our aim is not to systematically compare the experiences of learners from different cultural backgrounds (e.g., Eastern-Western, or any given nationalities), nor do we extend this study to examine the impact of cultural backgrounds or pedagogical approaches to learning outcomes. We argue that in these cases, comparison with any specific cultural backgrounds would be neither feasible nor relevant. The participants of the 21stCE alone represented more than ten different nationalities, which would increasingly often be the case with internationally offered online study modules. Perhaps even more importantly, the different cultural backgrounds of the learners can seldom be predicted when enrollment is open internationally, which makes specific cultural comparisons less helpful for the online education providers and facilitators. Therefore, the purpose of this study is to gain a better understanding of the challenges and advantages associated with authentic e-learning in multicultural learning contexts. The observations discussed in this paper are based on the results of two qualitative surveys conducted during and after the first implementation of the 21st Century Educators program, and the first pilots of the ALP course.

Table 2 summarizes the data collection from both cases.

The research data for Case 1, 21stCE, consists of the answers to two qualitative surveys that were conducted after the first semester and at the end of the program. Twenty six of 32 participants and facilitators fully completed the first survey, and 12 of 22 participants completed the second one. The data collected consists of open, narrative-type answers to the questions that mapped the participants’ experiences with various aspects of

Table 1. Summary of the cases

<table>
<thead>
<tr>
<th>Case</th>
<th>Case 1: 21stCE</th>
<th>Case 2: ALP Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizing University</td>
<td>Tampere University of Applied Sciences</td>
<td>Centria University of Applied Sciences</td>
</tr>
<tr>
<td>Participants</td>
<td>International teaching academics of Higher Colleges of Technology in United Arab Emirates.</td>
<td>Centria students and exchange students, mainly from the KEB-LeGE project.</td>
</tr>
<tr>
<td>Length of Program</td>
<td>1.5 years, 3 modules</td>
<td>2.5 months</td>
</tr>
<tr>
<td>Number of Participants</td>
<td>23-31. (23 completed all 3 modules, 31 completed at least one).</td>
<td>16 participated, 9 completed</td>
</tr>
<tr>
<td>Summary of Program</td>
<td>Postgraduate certificate for teaching in higher education. Professional development taken alongside teaching work.</td>
<td>Online unit for teacher students and students in various disciplines who require teaching and training skills in their work for promoting authentic e-learning processes in virtual learning environments.</td>
</tr>
</tbody>
</table>

by weekly webinars and also included a development task where students were asked to design or redesign an existing course using the authentic learning framework.

Data Collection and Analysis

For the development of quality multicultural e-learning we need to form an understanding of learning culture as a multidimensional phenomenon and learn to reflect the complex characteristics of multicultural e-learning (Goodfellow & Lamy, 2009). This paper examines the aspects of diversity and culture in these two programs.
their learning journey. For analysis, the survey results were first categorized according to the nine elements of authentic e-learning, followed by a thematization of the comments into cultural challenges and advantages.

In Case 2, the main objective was to gather and analyze students’ experiences with the course. The study data of the ALP pilot consist of Blackboard (Bb) (2011), and Optima (2012) online learning platform tracks (discussions, learning tasks, reflections and course feedback), KE-LeGE student interviews, KE-LeGE Facebook group site, and teachers’/researchers’ observations.

**CULTURAL CHALLENGES**

The analysis of the replies to the 21st Century Educators survey as well as the online artifacts of the ALP course revealed several themes related to cultural factors. Both challenges and successes with regard to the authentic e-learning approach could be identified. In this section, these areas are discussed in more detail.

**Table 2. Data collection summary**

<table>
<thead>
<tr>
<th>Case</th>
<th>Respondents</th>
<th>Data Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>21stCE 1</td>
<td>26</td>
<td>Qualitative survey after the first module of the program.</td>
</tr>
<tr>
<td>21stCE 2</td>
<td>12</td>
<td>Qualitative survey after the last module of the program.</td>
</tr>
<tr>
<td>ALP course</td>
<td>16</td>
<td>Online artifacts, discussions, learning tasks, reflections and course feedback; interviews, observations.</td>
</tr>
</tbody>
</table>

**Ambiguity Caused by the Authentic E-Learning Approach**

In both cases, one of the biggest challenges seemed to be that the open-ended nature and the process of inquiry characteristic for authentic e-learning caused uncertainty and even stress for some of the participants. Many said that the instructions, purpose of tasks or the process of authentic assessment were unclear to them. Learners expect to be given clear guidelines, and may feel anxiety when this does not happen in the anticipated way. This is well illustrated in the comment of the 21stCE participant:

*At the beginning of any course it is important to know exactly where it is going, what activities need to be completed, and in what timeframe. (Case 1, Survey 1).*

However, in both cases, the great majority of the participants who had sought help from facilitators or the teachers and peer students had had their problems solved. As an ALP student put it:

*First I was little confused with how to make development tasks, so if I had gotten sample, I would have learned and studied more easily. But it wasn’t too hard without samples because teachers honestly explained it very well. (Case 2, Student 3, 12.12.2011, Bb).*

This illustrates a central feature of authentic e-learning: authentic tasks should not be simplified at the outset, but the complexity should be dealt with, just like in real-life situations. This approach is likely to cause a “culture shock” for learners who are accustomed to a learning culture where clearly defined, smaller scale assessment tasks are prominent.
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It is also possible that the scientific background and discipline of the learners (cf. Joy & Kolb, 2009) might have had an impact on how confusing the authentic, collaborative learning culture and the reflective meaning-making process was for them, although some expressed openness to a new form of study.

I have taken one course from open cyber university. But I think this ALP has totally different form from that. So I'm looking forward to it! (Case 2, Student 3, 4.10.2012, Optima).

One of the most interesting findings was the clear difference in answers to the first and the second survey of 21stCE. The first set of data illustrated a great deal of anxiety and difficulties with regard to the open-ended and ill-defined nature of the authentic e-Learning approach. In fact, authentic tasks were identified as one of the three most challenging areas of the program. Many participants found it difficult to understand the instructions or the purpose of the tasks (see Teräs, Teräs & Herrington, 2012). A year later the results were quite the opposite: the majority of the participants listed the authentic tasks among the three most rewarding learning experiences during the program. One of the respondents mentioned that the most challenging thing had been “understanding the process at the beginning of the course” (italics by the authors). The results seem to support the rather common sense observation that new things tend to be confusing at the beginning but not anymore once one has become familiar with them. A similar progress could be identified in Case 2, as one student noted:

After drawing the concept map about Authentic learning (AL), we are learning little by little about what is the core concept of AL and also thinking about operationalising the authentic activities in our life. It is very good idea to find out broad information and contexts by ourselves from unlimited sources. Not only I realise that I am learning what is the authentic learning, but also I acknowledge that this course, this task from ALP is what the authentic learning is. Now I am sketching my first step of blue print about authentic learning. (Case 2, Student 2, 1.11.2012, Optima).

Group Dynamics and Communication

Especially in Case 1, some participants had at some point been frustrated with their team members. Time constraints and others not adhering to schedules caused frustrations, communication breakdowns occurred, and the expectations of the team were sometimes different or remained unexpressed. Some teams had gone through a full conflict during their collaborative learning process. Perceptions of time vary in different cultures, which may of course have an impact on how people react to schedules and deadlines. However, online collaboration is similarly challenging even within culturally more uniform groups. For example, Myllylä, Mäkelä, and Torp (2009) have observed challenges in online collaborative knowledge construction in all-Finnish groups of learners.

A lack of articulation also caused misunderstandings and collision. In the ALP course, blended learning implementation and weekly synchronous meetings (webinars) promoted finding solutions for asynchronous online group collaboration:

It is little bit hard to take part in, but I can learn in on, off-line both and get a feedback from teachers and co-students (also, collaboration). (Case 2, Student 10, 8.10.2011, Facebook).

However, collaboration often remained on a simple discussion level, whereas a deeper level of reflection and collaborative construction of knowledge was difficult to reach.

Overall, the formation of a learning community was in both cases demanding. This can at least partly be explained with different cultural
backgrounds. Firstly, higher education is traditionally largely based on individual work and many learners are not very experienced in collaborative learning (see e.g., Leppisaari et al., 2011). Moreover, some students had very little accumulated experience of how cooperation can be supported by computers and the Internet; instead they were largely perceiving computer use in education to be more individual work. This, again, is an indication of a different learning culture, which may be affected by academic tradition in the learner’s geographical area or field of study. Secondly, communication tactics differ in different cultures - both ethnically/nationally and academically defined. Intercultural communication can be challenging in a face-to-face context, not to mention in asynchronous, text-based communication where the risk of misunderstanding, offending or remaining unclear is very high even between individuals with similar cultural backgrounds.

Nevertheless, some students saw the benefits of collaboration at a distance:

*The atmosphere that is created by the students is helpful to their study. Moreover, students can help himself and also his peers by doing cooperative activities. [Collaborative study] is far more effective than independent study because of the intense interaction between students.* (Case 2, Student 2, 12.11.2012, Optima).

Social technologies were in both cases seen as a factor that promoted online collaboration and made it easier. This observation is supported by Torp, Myllylä, Mäkelä and Leikomaa (2009) who found that the process of collaborative knowledge construction of teacher students became more effective when social technologies were used instead of, or in addition to, a learning management system.

*As we used Optima in the Authentic learning class, we are using this webpage for doing discussion. From the help of this kind of webpages, we are allowed to interact each other such as commenting our opinions. Also, when we found one material related to Authentic learning, we might find them on people’s blogs or pages, which means everyone can share their perspectives on Internet.* (Case 2, Student 3, 12.11.2012, Optima).

*Using collaborative tools such as Gdocs, blogs etc has been a real good experience. Also I have tried to implement a few in my teaching and will continue to use more in future, which I think will be very effective.* (Case 1, survey 1).

Again, it is noteworthy that the experience the learners had with collaboration improved as the learning process proceeded. Whereas at the time of the first survey of the 21stCE, collaboration was perceived as the most challenging and even frustrating element in the authentic e-learning process, the results of the second survey indicated that it was the most rewarding element that the learners most valued - despite of the challenges. In order for this to be achieved, the collaborative element must not be an additional extra or an optional feature, for example a discussion forum where students can chat if they are interested or have time. Instead, collaboration must be an inherent part of everything that is being done. The following student comment summarizes the essence of collaborative learning in a very clear and insightful way:

*If each member in the group is willing to do something together, it doesn’t matter if the meeting is online or off-line.* (Case 2, Student 2, 12.11.2012, Optima).

**Expectations Regarding Scaffolding and Coaching**

The third major challenge identified in the data is the role of the facilitator and learners’ expectations regarding it. Some of the participants seemed to have expected more direct instruction, more clearly
defined tasks and more frequent and detailed interventions from the facilitators. In Case 1, there were also differences in how the facilitators saw their role. Some felt the need for more intervention and would have wanted to give step-by-step instructions, whereas there were some who hardly intervened - even when requested. Also, in Case 2, teachers aimed to take the role of mentors or coaches but in many steps of the learning process students would have wanted them to give “right answers” and “clear guidelines”. In addition, receiving feedback, comments and further questions from teachers was quite a new experience for some students.

The role of the facilitator (Case 1) or teacher (Case 2) in an authentic e-learning process is very different from the traditional teacher’s role, and this can be a challenge for the learners and the facilitator alike. Mällinen (2010) has observed that some teachers try so hard to step down from the podium and become “a guide on the side” that they actually become invisible. Land, Hannafin and Oliver (2010) also warn about mistaking the absence of support with student-centred design. The teacher in Case 2 articulated the new complexity in the teacher’s role:

I hope that ALP course could give you an example of how learning can be a process / a journey. Our understanding about AL grows step by step during the course. It’s important that we feel we don’t need to be ready - I hope we feel free to share also our preliminary and unfinished views/perceptions. (Case 2, Teacher, 8.10.2012, Optima).

Supporting the development of a learner’s self-confidence is essential in a new type of learning environment. It is also very important to consider how to take into account all the guidance resources of the learning community and to also promote learners’ mutual peer tutoring and scaffolding (Leppisaari, et al., 2011) so that the students learn to seek assistance as part of the learning process (Remedios & Clarke, 2009). Based on our experiences, the authentic learning program needs a community to make it work (cf. Oliver, Herrington, Herrington & Reeves, 2007).

There were also cultural differences regarding critical reception of information (cf. Remedios & Clarke, 2009). A comment of an ALP student illustrates this:

I became confused in distinguishing which is really valuable material for my study. Sometimes I felt it was like finding a needle in a haystack. For solving these problems, teacher’s advice and coaching are needed.:) (Case 2, Student 10, 12.12.2011, Bb)

The responses in Case 1 were very similar. The results of both surveys indicate that the participants valued comments and feedback from the facilitators, and would have appreciated to have them more frequently. Comments related to requests for “more timely feedback” and “more interaction with the facilitators” came up very frequently. It should be noted here, however, that the ALP students received more structured and frequent feedback from the teacher than the 21stCE ones. Moreover, the ALP students all had the same teacher, whereas there were several team facilitators for the 21stCE, all of whom had their own individual ways of working.

In their last self-evaluation at the end of the course the ALP students were asked to reflect on how they learnt best. One student wrote:

Comments from the teachers were helpful in developing concepts/thoughts. My thoughts would have been limited if there weren’t teacher comments. In addition to this group assignment was also effective in applying what I have learned. (Case 2, Student 1, 16.12.2012, Optima)

Whereas the value and significance of feedback as a part of the scaffolding and coaching process cannot be undermined, it is also worth considering whether the frequent intervention of the teacher may possibly have more negative effects
as well. While the comment above illustrates the importance of scaffolding and gives an example of access to expert performances, it may also carry the implication of a teacher as a knowledge authority whose opinion, in the end, is the right one. When teacher intervention comprises direct assistance rather than metacognitive prompts, it may in some cases encourage dependency on authority instead of promoting the development of critical thinking skills.

**CULTURAL ADVANTAGES**

**Sharing**

Collaboration may have been one of the major challenges in the authentic e-learning process, but it was clearly also one of the most rewarding aspects in both cases. Learning from others, access to expertise from outside the program, working in teams and especially following each other’s blogs or learning tasks and reflections were seen as great advantages of the program. In the traditional learning culture, not only students but also teachers often work in isolation from peers. However, learning and working together is a key aspect of authentic e-learning, promoted by many of its elements (authentic tasks, access to expert performances, collaborative construction of knowledge, multiple perspectives, articulation, scaffolding and coaching). One student articulated this well with this comment:

*Sharing ideas always broaden one’s thoughts and develop in depth. (Case 2, Student 3, 17.12.2012, Optima)*

The model thus creates plentiful forums and opportunities for shared narrative, negotiating meaning and building a common learning culture, making it an extremely useful model for multicultural learning. In Case 1, the participants worked in teams throughout the one and a half years of studying. Despite all the challenges discussed above, the participants highly appreciated the constant sharing of expertise. This was especially prominent in the responses of the second survey. When asked about the most rewarding learning experiences in the program, the learners listed things such as “working in group projects,” “sharing best practices with the team,” “working in teams and sharing” – one respondent even mentioned “the collaborative nature that underpinned most of the activities”. When asked about ways of improving the program, many suggested there should be even more group activities.

In Case 2, team teaching in the first pilot supported the processes of collaborative construction of knowledge and reflective sharing of the expertise, and helped students to understand the goals of learning culture and working practices. The sharing of one’s own growing understanding of the authentic learning phenomenon and elements was for many quite a new and very rewarding experience. ALP students commented:

*Other students here supported my learning, especially different mindmaps gave me a better understanding of AL (authentic learning). (Student 11, 5.10.2011, Bb)*

*By articulating we promote our learning deeply and make us think to be organised. Personally, this is the way to learn and memorise, so the most important thing is left here. How do we promote students to articulate? (Student 2, 26.11.2012, Optima)*

Different learning cultures may also affect the way we perceive sharing and collaborative learning. In a learning culture where organizing, categorizing and memorizing are central, discussion might be difficult at the beginning of the learning process, when the disconnected “bits and pieces” are not yet organized into a meaningful whole. It may be difficult to talk about concepts that are not yet clear. The discussion may become more fruit-
ful if it is started only when there is a sufficient understanding of the theoretical background (cf. Tharar, 2007, p. 51).

**Reflection and Articulation**

Reflection is one of the nine key elements of authentic e-learning. In both cases described here, the opportunity for ongoing reflection—both individually and collaboratively—was appreciated by most of the participants. The impact of reflection on learning and professional growth was also valued by many. The following student comment is a good example of this:

*It made me look at my own teaching style and methodologies in a critical way and provided me with opportunities to understand in more formal way the way I taught content to my students. (Case 1, Survey 2)*

In Case 1, blogs were used for reflection and articulation throughout the entire program. The learners enjoyed both the writing of their own blogs or reflection tasks, and many also mentioned that they had benefited from reading those of others. However, this was something that some of the learners “grew into,” instead of embracing it unreserved from Day 1. One of the participants mentioned that making their open questions and learning process public was not easy at first but in the end proved very rewarding. Revealing one’s unpolished thoughts and the process of learning with all cycles of trial and error, doubts and uncertainty—opening one’s heart and making public the process of learning to know oneself better—is indeed something that does not traditionally belong to our learning cultures. Some cultures might accept the idea more readily than others, but in most cases it would be something that has not been a part of the learning culture the participants were used to. In this light it is outstanding that reflection was so frequently mentioned among the most rewarding learning experiences.

In addition, in Case 2, particularly at the beginning of the learning process, reflection was experienced as very challenging. However, in this case too, students got used to the practice rather quickly. Teachers also emphasized that critical thinking and evaluative learning were expected and preferred (cf. Remedios & Clarke, 2009). However, the students needed encouragement for making critical and expansive questions, reflecting and articulating their learning. For example, the following two quotations comprise a student’s comment on self-evaluation, followed by the teacher’s scaffolded support at the metacognitive level, and response:

*This is the first self-evaluation. I have taken three times of lecture, found two links about authentic learning, done several assignments and started thinking about our development task so far. Now I'm catching the idea about Authentic learning vaguely. I need to get used to this module task more. (Student 3, 31.10.2012, Optima)*

The teacher commented:

*You describe clearly the main points of what you have done so far. You also tell how you feel about your learning at the moment. To support you to catch the idea of self-reflection, I will yet ask you some questions: Are you satisfied with your situation/learning process on ALP? Or is there something what you'd like to do differently? I see that you are working hard and your understanding of AL is growing. How do you feel you have worked in your group? How do you describe your contribution to the group task during last days? (Teacher, 31.10.2012, Optima)*

Cultural differences in the use of self-reflection were also evident and asking for students’ self-reflection about a topic was especially challenging, because in a traditional sense, they were not accustomed to reflecting on the process of their learning (cf. Leppisaari et al., 2011). Asynchro-
nous learning processes/practices seem to support reflective learning well (cf. Clarke, 2011) in multicultural learning environments.

Becoming more reflective and aware of one’s actions and ways of thinking is a key factor in increased cultural understanding. Antal and Friedman (2004) point out that critical self-reflection “opens up new ways of seeing a situation, expands the range of potential responses and helps people become more effective at generating shared understanding” (Antal & Friedman, 2004, p. 6). Therefore, creating an intentional space for continuous reflection can be seen as an essential feature of multicultural online learning. New social technology tools support the possibilities to create common meaningful spaces for reflective learning (e.g., group wikis, blogs, e-portfolios) (see e.g., Wenger, White & Smith, 2009). The role of reflection is also central in the reform of educational practices. Kenna, Yalvac and Light (2009) found that the more faculties get engaged in education-related reflection and collaboration, the more readily they adopt more student-centred teaching approaches.

Appreciation of Diversity

It is noteworthy that the multicultural nature of the program was warmly welcomed by the participants in both cases. They appreciated the multicultural learning environment, multidisciplinary collaboration and generally working with people from different backgrounds and felt that the diversity enriched their learning considerably. Writing blogs and reflection tasks, working on a team project and taking part in online discussions offered plentiful opportunities for participants to explore issues from multiple perspectives and benefit from the rich diversity. This, again, is a central element in-built in the authentic e-learning model. An ALP teacher student reflected on the learning experiences in the multicultural learning community:

On the ground of my experience, studying with peer and interacting with them is helpful for me. Studying with peer, I can get more information and feedback from them. Also, they are more easy to contact for asking and discussing so it is a benefit to me. (Student 10, 13.12.2011, Bb)

In Case 1, the participants truly experienced diversity on many different levels. Instead of trying to form teams that were as homogenous as possible, the opposite was sought. The teams were built in such a way that almost all participants were from a different country of origin and represented a different discipline. This way a very rich combination of ethnic / national cultures, learning cultures and cultures deriving from different scientific backgrounds was reached. Already the results of the first survey indicated that this was a successful strategy: not a single complaint about diversity emerged, but instead there was plenty of praise for things such as “connecting with different people,” “working with people from different backgrounds,” “different perspectives” and “good insight to a multicultural learning environment”. At the time of the second survey, the same elements continued to be valued. Many learners considered working in groups, sharing best practices with the team, and getting to know other participants to be the most rewarding aspects of the program.

LIMITATIONS AND THE WAY FORWARD

In this study, two cases of multicultural authentic e-learning have been examined in order to obtain deeper understanding of the way learners with diverse cultural backgrounds experience a study program that has been designed according to the authentic e-learning approach. The study does not aim at comparing the experiences of learners with certain nationalities, nor does it include any comparison of learning outcomes of
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different groups of learners. Being a case study with a qualitative research approach, it does not suggest generalizable results. However, similar observations regarding the elements of authentic e-learning could be made in both cases, and the findings can be helpful for educators and learning designers who design and implement online learning programs for multicultural groups of learners.

In Case 1, the data was collected using online surveys. The method was chosen because of a physical distance between the participants and the researcher, convenience, easy integration with the online learning environment, as well as the flexibility of the survey tool in designing questions. However, there are certain limitations regarding surveys: a link in the online environment or email is easy to ignore by time-poor respondents, and there is no opportunity for in-depth dialogue between the researcher and the respondents. The observations, online artifacts and discussions in the online learning environment that were used in Case 2 provide rich data, but on the other hand they lack the focus and opportunity for targeting questions. Thus using different types of data has allowed for us to sketch a richer and more detailed picture of the experiences of the learners. The next steps will involve narrative interviews of the participants (Case 1) and targeted online survey (Case 2). The interviews (Case 1) and online survey (Case 2) are conducted a few months after the end of the program, in order to gain a deeper understanding of the learner experience during the program, as well as the impact of the program in the professional practice of the participants.

CONCLUSION

Culture is a complex concept, and learning cultures are affected by many variables. Moreover, the traditional, teacher-centred and content-driven learning culture does not necessarily produce the kind of learning that is needed in the 21st century knowledge society. Striving for a learning design that accommodates and accords with different students’ existing learning culture is therefore not only almost impossible, but also “dangerous” (to use Antal & Friedman’s, 2004, description). Instead, it is crucial to develop learning designs that allow for dialogue, reflection and collaboration and thus creates a solid starting-point for the group to collaboratively create a multicultural, 21st century learning culture.

When moving out of the centre of the learning process, the role of the teacher changes and becomes more of a designer/script writer who delivers the pedagogical architecture for the “learning play” before it starts, and then acts as a participant, learning and facilitating in the network through the various movements between meta-communicative levels in the networked dialogue (Sorensen, 2007). Authentic learning programmes must be implemented by using the very working methods the students are expected to learn. In so doing in the cases described here, students gained significant and meaningful experience from the power of cooperation and feedback in learning. An ALP student summarized her findings as follows:

To support authentic learning, interaction and collaboration within individual, pair and team is important. Furthermore, effective access to experts is also necessary. Also learning community is a significant thing. (Case 2, Student 10, 13.12.2011, Bb)

Authentic e-learning seems to provide a useful framework for this type of a learning design. The nine elements of authentic e-learning all promote the type of activity that can lead to an increased cultural understanding and collaboration. This can also be seen in this study: learning from others, opportunities for reflection and diversity were greatly appreciated by the participants. However, the model is very different from traditional learning approaches and can therefore cause a type of “learning culture shock” for some learners. It is essential that sufficient scaffolding is provided
especially at the beginning of the program to help learners cope with the ambiguity and complexity of authentic tasks. Moreover, as authentic e-learning requires a great deal of collaboration and working with others, contrary to the traditional individual approach, special attention must be paid to facilitating the collaborative activities, communication and development of a learning community. Thus it is not surprising that the third key challenge identified in this study is scaffolding and coaching. It is important to develop new ways to harness a group’s mutual support and peer support to promote multicultural learning.

The cases we have examined differ in duration and group size. However, common features include their multidisciplinary and multiculturalism, and above all, the chosen pedagogical approach. Based on our study and research questions three common cultural challenges were recognized concerning the following factors: 1) Ambiguity caused by the authentic learning approach, 2) Group dynamics and communication, 3) Expectations regarding scaffolding and coaching. Accordingly, we have further identified three common cultural advantages concerning our cases: 1) sharing, 2) reflection and articulation, and 3) appreciation of diversity.

It could be said that authentic e-learning represents a paradigm shift from traditional to 21st century learning culture. In many ways, it also involves transformation and change - elements that are never very easy for learners. Moore (2005, p. 84) points out that “by avoiding transformation of perspectives, we may feel safe and secure, whereas shifting our underlying assumptions can make us feel insecure and unsure”. This draws our attention strongly to the eighth element of authentic e-learning: scaffolding and coaching. The role of the facilitator is essential in the process of developing a shared learning culture; he or she has the role of a leader of change, a supporter of a profound process of growth. Moreover, growing attention should be given to the role of peer coaching, especially in multicultural online learning (Liu, 2007).

Facilitating multicultural online learning in an authentic e-learning context is an important question that should be explored in practice, and investigated in further detail through ongoing research.

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ADDITIONAL READING


**KEY TERMS AND DEFINITIONS**

**21st Century Educators:** A pedagogical qualification training program developed at Tampere University of Applied Sciences. The target group is in-service teaching faculty who are subject matter experts without pedagogical background. The program is fully online and based on the principles of authentic e-learning.

**ALP, Authentic Learning Principles Course:** Authentic Learning Principles course offered by Centria University of Applied Sciences focuses on the following topics: what is authentic learning, why it is needed and how we can promote learning by using elements of authentic learning. Having completed the course the learner will be able to design, implement and evaluate online courses and teaching modules that support authentic learning and promote authentic learning processes in virtual learning environments.

**Authentic E-Learning:** Pedagogical conditions in online educational contexts—based on realistic settings and contexts—that provide opportunities for students to collaboratively undertake challenging and realistic tasks, resulting in meaningful products and significant learning.

**KE-LeGE:** KOR-EU Leaders for Global Education project (2011-2014) where 4 European and 3 Korean higher education institutes develop the skills of future practitioners to work in global...
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education contexts. The project funds student and staff exchanges as well as development of global education contexts.

Learning Community: A group of people who engage actively in learning together. They work collaboratively, support each other and share their knowledge with each other to achieve a shared learning objective.

Learning Culture: Shared learning of a given group, covering behavioural, emotional and cognitive elements that affect the way learning is perceived. Learning cultures are affected by complex cultural variables that may derive from nationality/ethnicity, academic traditions, personality, learning styles and methods of instruction.

Online Learning Community: A learning community that works collaboratively in an online environment, using online social networking tools and resources. Online learning communities share knowledge via Internet-supported media.